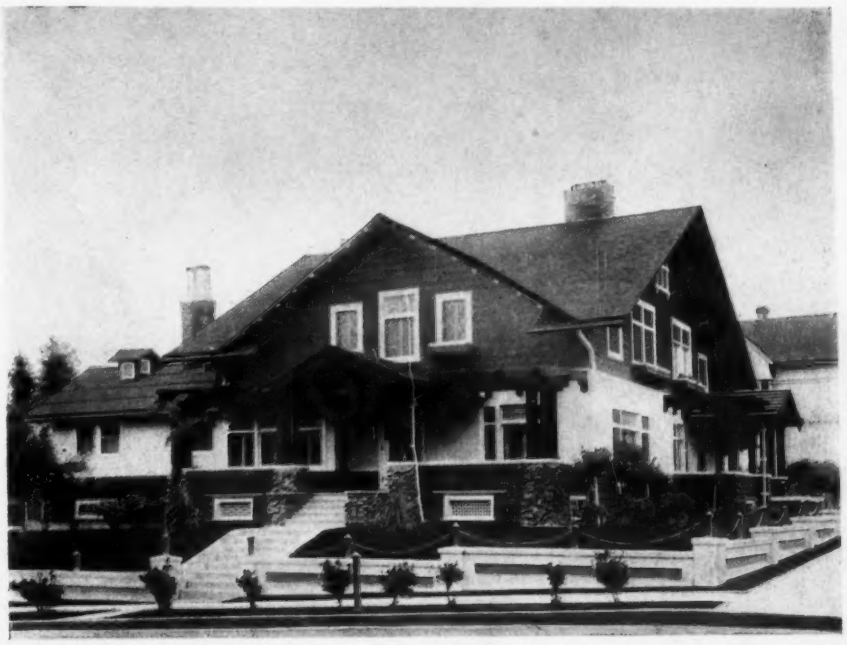
The PACIFIC COAST ARCHITECT



OFFICE OF PUBLICATION
PORTLAND, OREGON
TWO DOLLARS AND A HALF A YEAR
TWENTY-FIVE CENTS PER COPY

VOLUME 1 JUNE, 1911 NUMBER 3

Pacific Face Brick Co.

MANUFACTURERS OF

High-Grade Face AND Ornamental Brick

WE MAKE A SPECIALTY OF MANTLE AND CHIMNEY BRICK

Large Assortment of Shades Always in Stock

DRY PRESS	PLASTIC
White	White
Buff	Buff
Gray	Tan
Chocolate	Red
Red *Paving Brick*	

HOLLOW BUILDING BLOCKS
Economical — Strong — Durable — Fireproof

Main Office: 402-3 Commercial Club Bldg., Portland, Oregon
Works: Willamina, Oregon

The Printing Art

THE PACIFIC COAST ARCHITECT
Is an admirable trade-paper, progressive, artistic and a beautiful magazine from cover to cover and the craft-work is a true sample of

KILHAM QUALITY PRINTING

Our Engraving, Printing and Bookbinding Departments, modern facilities, our artists' and practical experts' new and original ideas creates a style and character peculiar to our progressive shop.

KILHAM STATIONERY & PRINTING CO.
CORNER FIFTH AND OAK STREETS, PORTLAND, OREGON

The New Broadway Bridge

Will be Supported on

PORTLAND CONCRETE PILES

WRITE FOR OUR NEW CATALOG

Made by the

Portland Pile & Equipment Co.

Builders of the Dallas-Oak Cliff Viaduct
Second Largest Concrete Pile Job in the World

LEWIS BUILDING :: :: PORTLAND, OREGON

We are sole manufacturers of the famous

"Newberg Red" Face Brick

OTHERS USING THE WORD TO ADVERTISE THEIR GOODS DO SO UNLAWFULLY

Remember the Firm

NEWBERG BRICK AND TILE COMPANY

Phones, Main 475 *and* A3142

Principal Office: 605-7 Board of Trade Building
Portland, Oregon

Cantilever Flat Slab Construction

FOR WAREHOUSES, FACTORIES AND HOTELS. THE TWO LARGEST CONCRETE BUILDINGS NOW BEING ERECTED IN PORTLAND USE THIS DESIGN

HAVEMEYER BARS
COLUMN SPIRALS
BEAM UNITS

ALL CLASSES OF CONCRETE REINFORCEMENT DESIGNS

WRITE US FOR ESTIMATES OF COST OF REINFORCED CONCRETE CONSTRUCTION

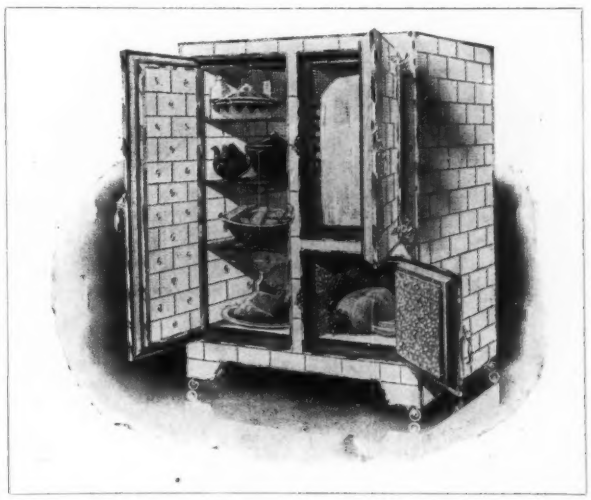
Concrete Steel Products Co., Engineers and Manufacturers, Chicago

Western Office: 512 Lewis Building, Portland. Agencies in All Coast Cities

The Brunswick-Balke Collender Co.

Manufacturers of

The Wickes Oak and Tile Refrigerators, Billiard Tables for the Home, Billiard and Pool Table Supplies, Bar Fixtures, Bowling Alleys and Supplies



SPECIAL FIXTURE ORDERS SOLICITED AT THE NORTHWEST OFFICES

46 Fifth St., Portland, Oregon — 200-2-4 First Avenue South, Seattle, Wash. — 216-18 Wall St., Spokane, Wash.

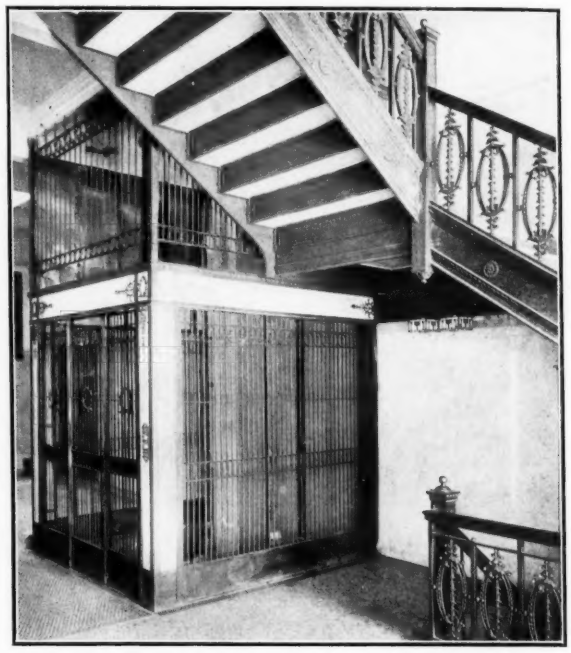
Phones: Main 851 Home, A1870

OREGON HARDWARE CO.

Cutlery, Tools and Builders' Hardware

C. G. JENNINGS, Manager

107 Sixth Street Portland, Oregon



Columbia Building, Spokane, Washington—*Prusse & Zittel, Architects*

Spokane Ornamental Iron Works

Builders and Designers of Ornamental Iron and Bronze

Spokane, Washington

Portland Elevator Company

Manufacturers of

Passenger and Freight Elevators

Special Hoisting Machinery and Electrical Apparatus

Expert Armature Winding & Motor Repairing
General Machine & Millwright Work Solicited

Phone Main 1537

Works: 5 & 7 First St., N., PORTLAND, ORE.

EFFICIENT-ECONOMICAL-SENSIBLE REINFORCEMENT FOR CONCRETE

Kahn System

Cantilever Flat Slab
Hollow Tile Flat Slab

Designs in

Plain Twisted and Rib Bars
Hy-Rib, Metal Lath and
Structural Steel

J. A. Currey & Co.

SPECIALISTS IN REINFORCED CONCRETE

1007-9-10 Board of Trade, Portland, Oregon

LOBBY, IMPERIAL HOTEL, PORTLAND

The Lithic Manufacturing Co.

Manufacturers of

SCAGLIOLA AND SANITARY
PLASTIC FLOORS

Selling Agents for Raecolith Sanitary Flooring

"The floor that stands the test of time"

191 SEVENTH STREET Phone Main 5299

INDIVIDUALITY

That's what you want in making your house a real home

Exclusive Designs Our Specialty

Wall Paper, Chintz, Satin, Velvet, Linen and Tapestry, Finishings, Willow, Garden, Mahogany and Period Furniture, Brasses, Silver, Sheffield Plate, etc.

NO DUPLICATE IN OUR STOCK

We contract for all sorts of interior and decorative work

Our prices will appeal to you. Estimates made and suggestions offered as required

VISITORS WELCOME

The C. Ellison Parker Co.

Interior and Architectural Decorators

Telephone Main 4603

1928-30 SECOND AVENUE, SEATTLE, WASHINGTON

E. THOMAS PHONE EAST 198

PORTLAND ARCHITECTURAL DECORATING CO.

Manufacturers of

Interior and Exterior Ornaments of every description in Cement & Plaster

Columns, Capitols, Brackets, Cornices and Enrichments of all Kinds. Estimates and Designs Furnished on Application

388-390 EAST ASH ST. (Cor. Grand Ave.)
PORTLAND, OREGON

READY FOR USE

The Correct Thing

For Hotels, Homes, Flats, Apartments

Economical
Healthful
Sanitary
and
Convenient

Holmes Disappearing Bed

Architects endorse and Specify it
Owners and Investors demand it

Holmes Disappearing Bed Company

INCORPORATED

Maximum revenue from minimum space

DURING THE DAY

369-372 Arcade Annex, Seattle; 225 South Wall St., Spokane; S. B. Cook, 422-3-4 Failing Building, Portland; R. 210 Riggs-Selman Building, Vancouver, British Columbia

If you want a bid on a
Steam Plant
Hot Water Plant or
Warm Air Plant

We've got the knowledge and the best material. ¶ If you want a ventilating plant of any kind for any class building, we can give you, Mr. Architect, the necessary data for it, which you probably haven't at hand. ¶ It won't cost you a cent to see us or write us. ¶ We are in business to serve you in any way we can in either heating or ventilating. ¶ We have the largest, lightest, best equipped and best conducted business on the Pacific coast for heating and ventilating work.

The W. G. McPherson Co.
19th and Wilson Sts., Portland, Oregon

Oregon Brass Works
INCORPORATED
FOUNDERS AND MACHINISTS

High grade material. Skilled workmanship. Bronze, brass, copper, aluminum and composition castings. Finishing and plating. Drawn brass, rod, wire sheet and tube brass. Our machine shop is well equipped and we are prepared on short notice to fill orders to the full satisfaction of the trade as to workmanship and material.

Specialists in Store Front Construction

Our Hester System of Metal Sash and Bars for plate glass construction is attracting the attention of architects and builders everywhere. It is installed in many of the finest buildings of the Pacific coast cities as well as in the Eastern states.

69-75 SECOND ST., PORTLAND, ORE.

Factory Windows

THE OLD WAY

Should be self-closing and fireproof. The **A. F. CIZEK** patented Double-Hung and Pivoted Metal Window and the **A. F. CIZEK** Factory Window represent the two best windows on the market today for factory, warehouse and office building. They afford the highest degree of protection from fire, together with ease of ventilation and cleaning.

THE CIZEK WAY

An Interesting Catalog Sent on Request

A. F. Cizek Sheet Metal Works Co.
739 C STREET, TACOMA, WASHINGTON

Clay Tile

to meet every structural requirement of the most discriminating architect or builder

STOCKS CARRIED IN PORTLAND, TACOMA, SEATTLE AND VANCOUVER, B. C.

Far West Clay Company
TACOMA

The Pacific Coast Architect

VOLUME 1 — PORTLAND, OREGON, JUNE 1911 — NUMBER 3

COAST PUBLISHING COMPANY, PUBLISHERS

F. O. THOMSON, *Editor* GEO. L. BLIVEN, M. E., *Associate* L. J. FLYNN, *Advertising Mgr.*

PUBLISHED ON THE FIFTEENTH OF EACH MONTH AT 803 LEWIS BLDG., PORTLAND, OREGON

Subscription in the United States and possessions
$2.50 a Year. Foreign and Canadian $3.00 a Year

Changes in, or copy for new advertisements must reach the office of publication not later than the Twentieth of the month preceding issue.

The Editor will be pleased to consider contributions of interest to the readers of this publication. When payment for same is desired this fact should be stated. Self addressed envelopes must accompany all such contributions.

ADVERTISING RATES ON APPLICATION — TELEPHONE MAIN 5121

Portland Continues to Build

Taking into consideration the condition of the money market throughout the country and the general retrenchment of building operations, Portland's building record for May is considered out of the ordinary. We question whether any other city in the United States will show a greater or even as great a percentage of increase in building permits.

The totals show a decided increase in the number of permits issued over May of last year. During the month 677 permits were issued at a value of $1,868,130, compared with 598 permits at a value of $1,803,445 for May, 1910.

"Shooting Up" a Building

Truly, the days of the "bad man" are passing. Not only has the law put a "crimp" in him, but now they are stealing the "vernacular" of his kind for trade purposes. No longer will "shooting up a place" refer only to a man with a gun, for now we are to have a man and a gun to "shoot up" our concrete walls.

Time is money, and putting up a forty-story steel structure in six months is too slow. An inventor has appeared who proposes to shoot walls into place with a rapid fire gun. It is claimed for the invention that it will accomplish as much in one day as the united efforts of twenty-four men by our present slow (?) methods. The cement gun is to succeed the cement mixer. No more will you see a procession of tired men wheeling loaded barrows. Instead liquid concrete is to be shot into place by means of compressed air.

Thomas A. Edison's prediction that cement was the means by which building construction would be revolutionized seems in a fair way to be realized. He planned building by filling giant molds. The inventor of the cement gun intends to fill these molds as fast and faster than they can be erected.

First, there is a long tube of sufficient textile strength to withstand the pressure of both compressed air and water; this is the gun barrel. There is a valve just forward of the breech of the gun and another near the muzzle. Compressed air is admitted through the first, and water through the second. At about the point of the vent in the ordinary breech-loading cannon a tube-like connection is established with a hopper, a wide-angled V-shaped affair.

Dry cement and sand are thrown into this hopper by two men, and here, aside from valve manipulation and directing the cement stream, the human element feature of cement gun operation ends. The hopper vibrates constantly, mixing its contents of cement and sand thoroughly before it drops down through the tube connection. Once in the gun barrel, the mixture is shot forward by the compressed air fed through the valve. At the muzzle a stream of water is encountered that does not check velocity, but mixes with the sand and cement, the whole being driven out of the gun end with sufficient force to carry it to the desired point.

Brayton Backs Water

The loudly heralded and threatened suit of Louis F. Brayton, representing the Stone & Webster Engineering Company, against M. L. Kline, noted in our last issue, has petered out. It was not a healthy firecracker, but merely a weak "squib." Mr. Brayton claimed that Mr. Kline was a member of the plumbers' trust and had refused to deliver plumbing supplies to his company for use in the Wilcox building, now in the course of construction.

The real facts in the matter seem to be that Mr. Brayton was dilatory in placing his order and when he attempted to secure his supplies Mr. Kline declined to tie himself up to a time contract. In a letter to Mr. Kline, under date of May 31, Mr. Brayton refers to the incident as a "pure misunderstanding." It would appear that Mr. Brayton neglected to look before he leaped.

Excuses for Non-Performance of Contract

That other sub-contractors, as well as the principal contractor, were prevented from completing the grading and construction of a railroad within the time required by their respective contracts, would not prevent the principal contractor from recovering damages of a particular sub-contractor for breach of his contract to complete his part of the work within the required time, caused by a fire damaging his equipment; the express words of the contract making time of the essence. Sands & Oliver vs. Quigg. Supreme Court of Appeals of Virginia. 69 Southeastern 440.

Clay Products As A Building Material

By S. GEIJSBEEK

The general tendency of builders is to build cheap, and the consequences are that material is used which appears to be cheap at first cost. Wood is the cheapest material which can be used for any building and, while it is cheap at first cost, it is the most expensive to keep up. It is astonishing to observe the ignorance of the people in general as to the comparative cost of building materials, and if a better knowledge was had, clay products would be used in many more buildings than is used at present.

Through the activity of the Building Brick Association of America, which was organized a few years ago by the clayworkers of this country to promote brick as a building material, more information can now be obtained regarding this matter.

A building built of clay products has many advantages which a wooden building never will show. A brick house is cooler in the summer and warmer in the winter than a frame house. Insurance in a brick house or building is less than in a frame structure, and the upkeep of a brick structure is nothing as compared to the upkeep of a frame building.

It is a proven fact, which many builders have to admit to their sorrow, that *a frame house reaches its prime as soon as the last carpenter and the last painter are out of the way*. After that time the house is on its downward path, and every year adds to the expense of keeping it in good repair.

With a brick house the matter is quite different for many reasons, and after it is built and *the brickmason finishes his job and walks away with his tools, he never comes back*, and the house increases in value every year as it gets older.

That the first cost of a brick house or building is not as prohibitive as many people may think is shown in the following tables, which were obtained by the Building Brick Association and are published by them in pamphlet form. The average bid was obtained from five bids, and the bidding was done on a two-story house.

Type Construction—	Av. Bid.	Excess over clapboard in Dollars.	Excess over clapboard in Pctg.
Clapboard	$6,759.95		
Shingle	6,868.80	$108.85	1.6
Stucco on Frame	6,952.90	192.95	2.9
Brick Veneer on Studding	7,153.98	394.03	5.8
Stucco on Hollow Block	7,187.65	427.70	6.3
Brick Veneer on Boarding	7,226.44	466.49	6.9
10-inch Brick Wall	7,372.48	612.53	9.1
Brick Veneer on Hollow Block	7,483.16	723.21	10.7
12-inch Brick Wall	7,641.00	881.05	13.0

Additional cost over frame construction:

Brick Veneer	Not over	5 per cent
Hollow Block	Not over	6 per cent
9-inch Brick Wall	Not over	8 per cent
12-inch Brick Wall	Not over	12 per cent

A close comparison of these facts is very interesting. Considering that the first four types of construction can still be classified as being frame construction, we find that there is only one-half of one per cent difference between a frame building and a fireproof building, even if we take that brick veneering on boarding is a frame construction, and we can build a hollow block building for six-tenths of one per cent less. The cost increases as we used heavy brick wall, but the general increase is only slight in comparison to the large increase we find in the cost of the different frame construction.

The conclusion reached from this data is that it is just as cheap to build a residence or building of hollow block, and plaster the same with stucco or cement, as it is to build a frame building. If we take into consideration that after two years the frame structure will have to be painted, and the hollow tile structure does not need any upkeep, it will be granted without much argument that this is the ideal type of future construction.

We have now pointed out the great value of hollow tile in construction work, but we should not neglect the other clay products, which are a valuable asset also. Burnt clay for building purposes is as old as the world itself. It has been used for every purpose known to mankind, and it cannot be compared with any other building material. There are no imitations of clay products; they are of a mineral substance which is found in all countries. They are formed, dried and given a burning process, by which they change their physical condition and after this process they will last forever.

Other materials are put on the market to compete with clay products, but they are, as a rule, the results of prepared materials which first have been subjected to a burning process, after which they are mixed again and cast into forms, and as they are not again subject to a burning process, they do not have that stability which is characteristic of clay.

Any building in which clay products have been used presents a pleasing appearance. A modern skyscraper, built of brick with steel frame, hollow tile construction, face brick front with terra cotta trimmings and cornice, is certainly a masterpiece in which any architect who has designed the same has shown his artistic and technical genius, and which will stand as a monument for his name for all time to come. The building so constructed will last forever.

The cost of lumber has gone up considerably, while the cost of clay products has been steady on the same basis. Today the cost is even lower than it was a few years ago. In trying to build better buildings, we are very much encouraged nowadays by the assistance of the insurance companies. They have stepped down from the idea that a good fire department was the only thing necessary to maintain lower rates. They have built a laboratory in Chicago which they pronounce the best type of thoroughly fireproof building. Clay products were entirely used in the same. The insurance people point with pride to this "Underwriters' Laboratories Building." Residences, office buildings, warehouses, in fact, any building constructed along these same lines will be fireproof and a testimony that clay products are the best building materials.

In the Eastern and Middle West states clay products are, of course, more used than on the Pacific Coast, as there is the source of lumber and it is therefore so much cheaper. But these facts should not prove an argument for using less clay products and more lumber as a building material. It is not the first cost we ought to look at in building for permanency. If we were not building for permanency we would not have to build at all, for a canvas house or a tent would be all that would be necessary.

We build for permanency and for a safe investment, so that we get full return for the money spent in construction,

(Continued on Page 114)

The Spokane Architectural Club

The Spokane Architectural Club, which has been in existence since 1899, under date of June 6, 1911, filed articles of incorporation, and elected for its officers to serve the rest of the year the following men: President, Julius A. Zittel; vice-president, C. Z. Hubbell; secretary, H. C. Whitehouse, and treasurer, F. P. Rooney. The trustees elected are: Julius A. Zittel, K. G. Malmgren, L. L. Rand, H. C. Whitehouse, C. Z. Hubbell, F. P. Rooney and C. Ferris White.

The club has announced a series of lectures, and through the efforts of the educational committee, an interesting list of lectures has been outlined. The lectures are to cover "Achievements in the Field of Architecture." The subjects are as follows:

June 20—"Spokane Architecture and Its Future," Julius A. Zittel.

July 6—"City Buildings and Municipal Architecture," Commissioner C. M. Fassett.

July 18—"A Well Designed Home and Grounds," K. K. Cutter.

August 15—"Architecturally Designed Engineering Structures," City Engineer Morton Macartney.

August 29—"A Well Planned Modern City," Ernest V. Price.

September 7—"The Architect's Relation to His Client," H. C. Whitehouse.

September 19—"Interior Decoration," C. Ferris White.

October 2—"Church Architecture," R. C. Sweatt.

October 17—"Architecture in Venice," J. M. Goodwin.

October 31—"Training for the Profession of Architecture," W. F. Dolke, Jr.

The local newspapers have taken a great interest in the course and have promised to publish in full each lecture as it is given and also to illustrate them. This course of lectures has been formed primarily for the education of the public, and the Architectural Club is quite pleased with the results so far.

At a recent meeting of the club a committee was appointed to hand in recommendations for the establishment of a bureau of employment for draughtsmen. The club members feel that a great deal of good can be accomplished from this bureau, both for the draughtsmen and the architects.

H. C. WHITEHOUSE, Secretary.

A New Brick Plant

According to the *Malheur County Enterprise*, Vale, Ore., is to have a large brick plant, to be established by Eastern capital. The *Enterprise* says: "The establishment of a $200,000 cement plant in Vale within the next few months is now almost assured. The business men of this city are ready to back up the promoters in the sum of $20,000 to $25,000 to show their faith in the future development of such an industry in this section. Banker M. G. Hope, who has been corresponding with the parties who want to put in the cement plant, yesterday wrote them that he had been instructed to notify them of the fact that Vale business men were with them heart and soul, and ready to give all financial aid needed, providing the promoters meant business.

"The plant will employ 200 men, who, with their families, will mean more than 1000 new people to the town. The plant is to be what is known as the Kiln plant. The hills east of the city abound with all the ingredients necessary for the making of Portland cement. Analysis of the native rock shows that the per cent of lime is strong, from 56 to 80 per cent."

Building Less In April

Decline All Over Country Shown by Statistics. Falling Off Small in Portland, and Total for First Four Months of Year Shows Gain

Uncertainty in National politics and anticipated labor troubles in the large building centers are reasons given for the general decline in the statistics of the building record for the month of April. Official reports show an aggregate decrease for the month of about 17 per cent, as compared with the same month of the previous year. Most of the cities reporting show a loss of from 6 to 76 per cent and among them is included nearly all of the cities of the Pacific Coast.

While Portland suffered a loss for the month amounting to about 10 per cent compared with the figures for April last year, the total for the first four months of this year shows a gain of 14 per cent over the corresponding period of 1910.

New York showed a loss over the previous year of about 25 per cent; Philadelphia, 26; St. Louis, 25; Baltimore, 36. The following important gains are recorded: Dallas, Tex., 188 per cent; Manchester, 112; Worcester, 108; Knoxville, 92; Little Rock, 81; Detroit, 70; Toledo, 67; Salt Lake City, 39.

Los Angeles, Oakland, San Francisco, Seattle, Spokane and Tacoma all showed a decrease for the month. Salt Lake City showed a slight gain.

Particulars are found in the following table:

City—	April, 1911.	April, 1910.
Atlanta	$ 852,363	$ 1,111,177
Baltimore	1,138,777	1,802,310
Birmingham	197,690	367,428
Buffalo	918,000	875,000
Chattanooga	45,947	77,981
Chicago	8,581,100	7,837,200
Cincinnati	960,730	1,179,885
Cleveland	1,460,939	1,711,165
Dallas	1,158,220	401,565
Denver	602,225	1,184,500
Des Moines	77,930	151,050
Detroit	1,930,115	1,134,700
Grand Rapids	181,137	213,862
Hartford	825,835	572,945
Indianapolis	659,560	721,918
Kansas City	1,073,514	1,823,830
Knoxville	35,315	18,410
Little Rock	223,686	123,102
Los Angeles	1,613,485	3,360,577
Louisville	526,450	296,559
Manchester	339,645	160,005
Memphis	656,115	349,967
Milwaukee	1,301,967	920,464
Newark	768,575	1,828,419
New Haven	305,639	763,608
New Orleans	283,352	408,068
Manhattan	14,195,197	15,891,311
Brooklyn	3,379,155	4,300,100
Bronx	1,767,530	5,637,325
New York	19,341,882	25,828,736
Oakland	684,519	1,621,423
Oklahoma City	451,205	481,885
Omaha	685,203	583,005
Paterson	229,936	219,121
Philadelphia	3,640,820	4,589,300

Plumbing For Large Buildings

By R. E. HEINE

The demand for better sanitation in semi-public and office buildings, together with the more stringent rules and requirements on the part of municipal authorities, has urged manufacturers, architects and contractors to a more thorough study of the conditions and problems in order to conform to the highest standards in this particular branch of work.

Toilet rooms and toilet facilities in large buildings should be subject to considerable study, not only as to equipment, but also as to detailed arrangement.

The question of ventilation is one of prime importance, as it is likely to involve other portions of the building. Toilet rooms are located either on a court or light-well, or constitute interior rooms, in which latter case mechanical ventilation must be resorted to. Proper ventilation cannot be secured unless an inlet as well as an outlet for the air is provided, which fact should be borne in mind in such cases where toilet rooms open to a court or air shaft only. If, instead of windows, registers are used, louvres should be provided to permit of regulation of the draft. A small register placed in the lower panel of the door will be found of great assistance towards increasing the frequency of air changes.

Where mechanical ventilation has to be resorted to, the exhaust registers should be placed near or just above the floor line. If dividing partitions between the stalls are used, these registers can be placed underneath these partitions and, unless the room contains more than four fixtures, one register will provide sufficient exhaust. A transom or open grill above the door is necessary to insure perfect ventilation, the incoming air to be taken from or near the ceiling, which at the same time effects a removal of vitiated air from the corridors. From four to five changes per hour of the air in toilet rooms will be found sufficient to meet the average conditions, although in much frequented places six to ten changes may be necessary. Reducing the exhaust fan capacity below the sum total of all the toilet rooms is poor economy, but the fan should be provided with such controlling devices as will permit of operating at any point between one-half and full normal speed. The connection between the main exhaust duct and fan should be a flexible one (double canvas, painted), in order to eliminate the transmission of vibration and noise.

Sanitary features should govern the selection of the type of fixtures to be used. The one-piece porcelain urinal, with integral floor-trap, has superseded all other types, and eliminates the necessity of a separate floor drain for the toilet room. As the trap for this type should be set below the floor, raising of the latter may be necessitated, which is very undesirable. By careful planning, exposed piping at the ceiling may be avoided. Automatic flushing tanks should be used in preference to chain or hand pulls, as the latter offer no assurance of proper or regular flushing.

Wash-basins of the porcelain or enamel type are preferable to and more sanitary than those having marble slabs. In choosing the design, corrugations, recesses and ornamentations are to be avoided. Faucets of the self-closing type, preferably those closing with the pressure, are almost universally used in public and office buildings, and a type of handle which can not be kept open by the insertion of a block or rod of some sort will prove to be the least annoying. Some simple and reliable form of waste, which can not be pulled out or easily tampered with, is decidedly better than the plug and chain. The additional first cost of such a type will soon be offset by loss from theft and renewals of plugs and chains.

As the basin and the toilet supply of water is usually taken through house tanks from a well, a separate service for drinking water will often be found necessary and advantageous. This system should be arranged with a circulating riser so that a water cooling plant may be installed at a future time if not contemplated in the original installation. Tanks for the drinking water supply should be provided with tight-fitting covers.

In selecting the water closets, a syphon-jet type, with heavy bowl, free from ornamented surfaces, and the outlet of which will permit the passing of a ball two and one-half inches in diameter, will be found the most satisfactory and economical in the end.

The wall type, i. e. one supported entirely from the wall, while not as generally used as other types, possesses some meritorious features. The toilet room floors can be easily and thoroughly cleaned, there are no screws or bolt heads on the floor subject to corrosion and the floor slab can be built without the necessity of holes for piping. While perhaps a somewhat heavier wall is required to support the closet, this wall may be utilized in part for air ducts and pipes, and the length of the stall decreased from four to eight inches than where a floor type of closet is used.

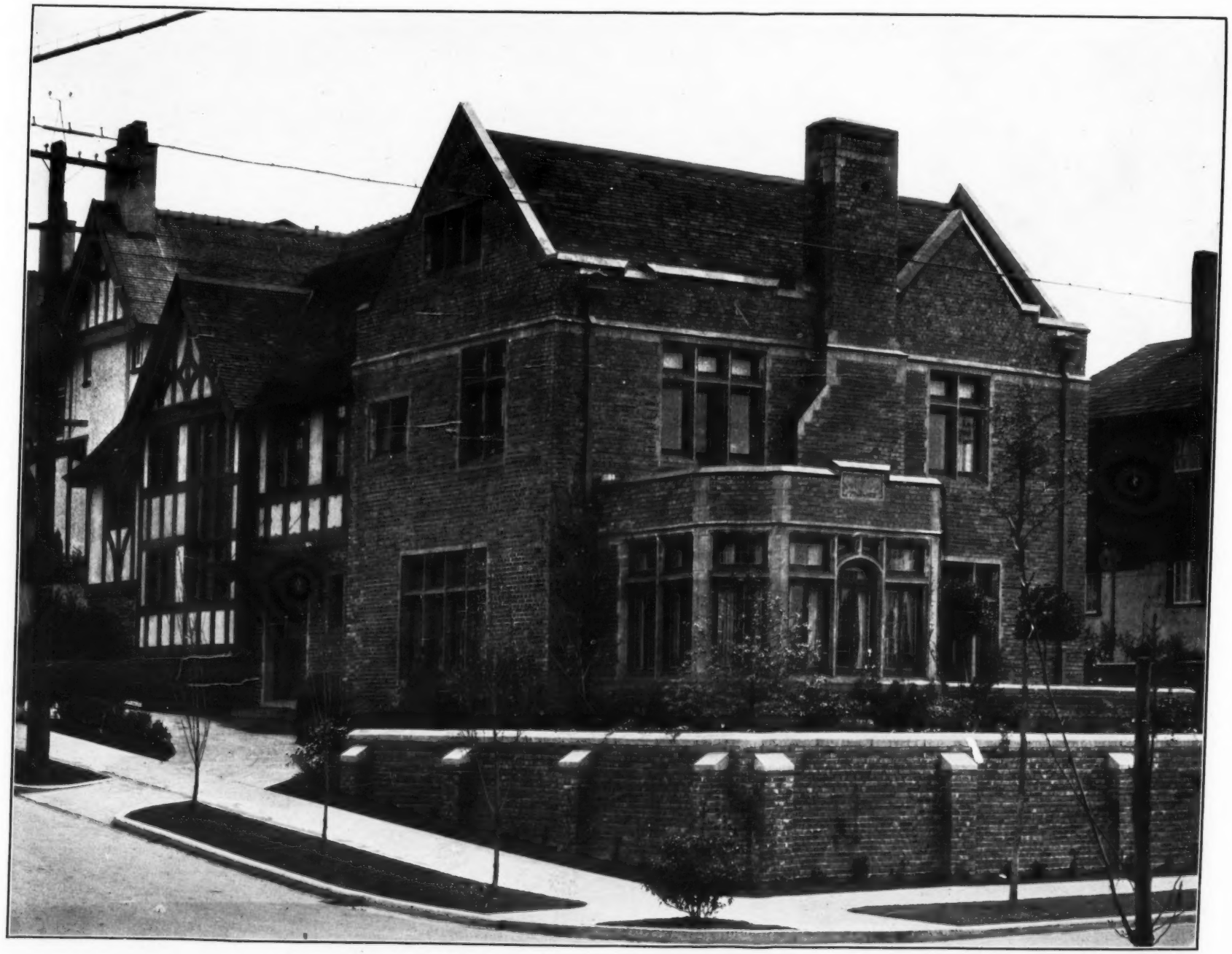
Flushing tanks with chain or lever pulls have almost entirely been discarded in favor of the flushometer. The first cost of an installation of the latter is somewhat higher than that of tanks, owing to increase in size of supply pipes and the cost of the valves, but proves to be decidedly more economical in the consumption of water. Rubber diaphragms and delicate mechanisms are to be avoided in flushometers. The valves should be placed entirely outside of the bowl and in a manner permitting of repairs without entirely disconnecting the closet.

Minor accessories and equipment, as well as the general finish, are governed entirely by local conditions and ought never to interfere with the general arrangement or construction. Adherence to the old saying that the "best is none too good" will contribute largely to the ultimate success of this feature of the building.

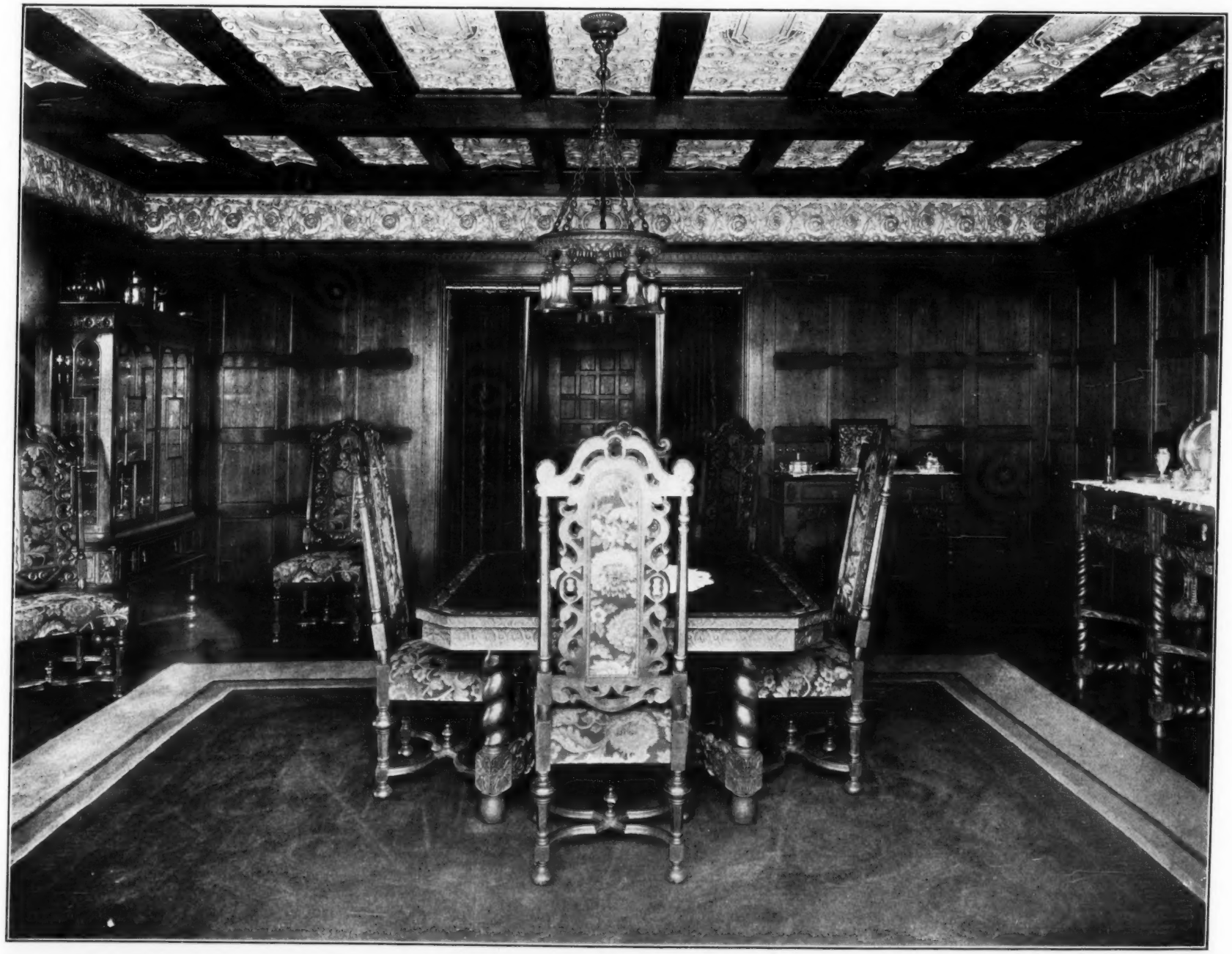
Watertight Concrete Walls

To render concrete walls constructed in wet grounds watertight has always been a perplexing problem and one that is solved, if solved at all, with considerable difficulty. The problem was recently raised in the construction of the sewage-pumping station at East St. Louis, Ill., and was solved by the use of steel plates. Great precautions were necessary to prevent an inflow of water to the pump floor, which is several feet below the normal ground saturation.

Asphaltum and waterproofing compounds mixed with cement was used for waterproofing the foundation slab, seven and one-half feet in thickness, near the middle. From a level below this waterproofing layer, steel plates were placed in the side walls at a distance of one foot from the back face. As they were placed they were riveted into a complete shell, the joints being pointed with asphaltum. The results were entirely satisfactory.



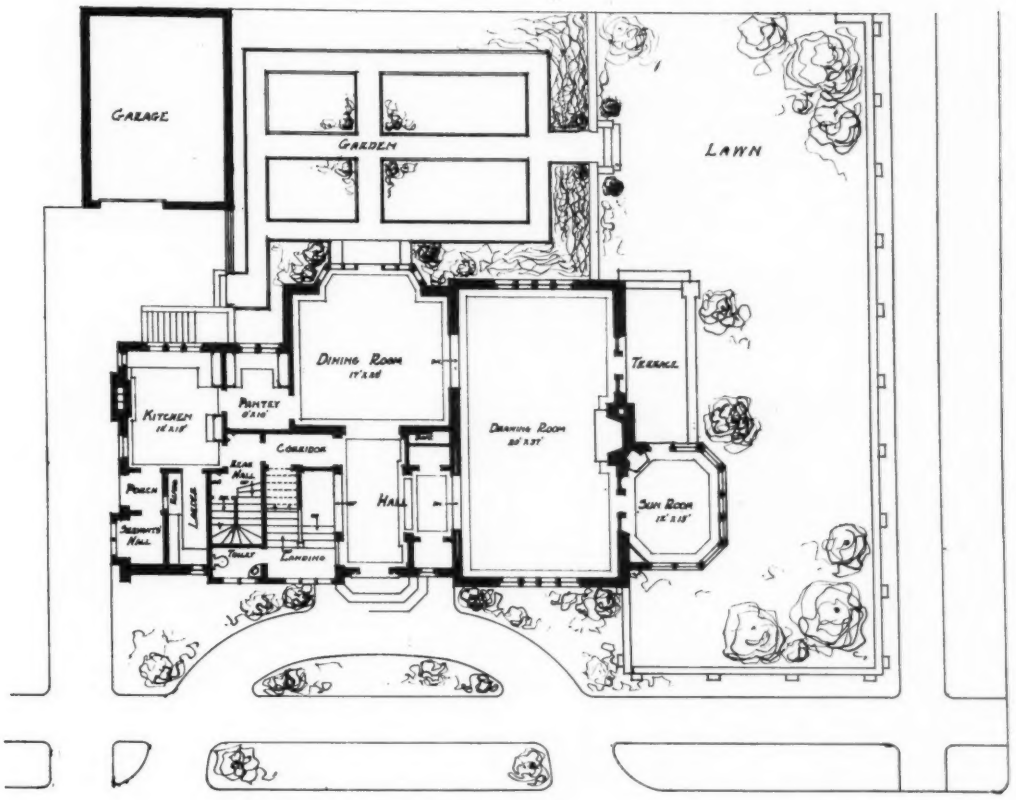
Residence for Mrs. Clare Farnsworth
Mr. W. Marbury Somervell, Architects, Seattle, Wash.



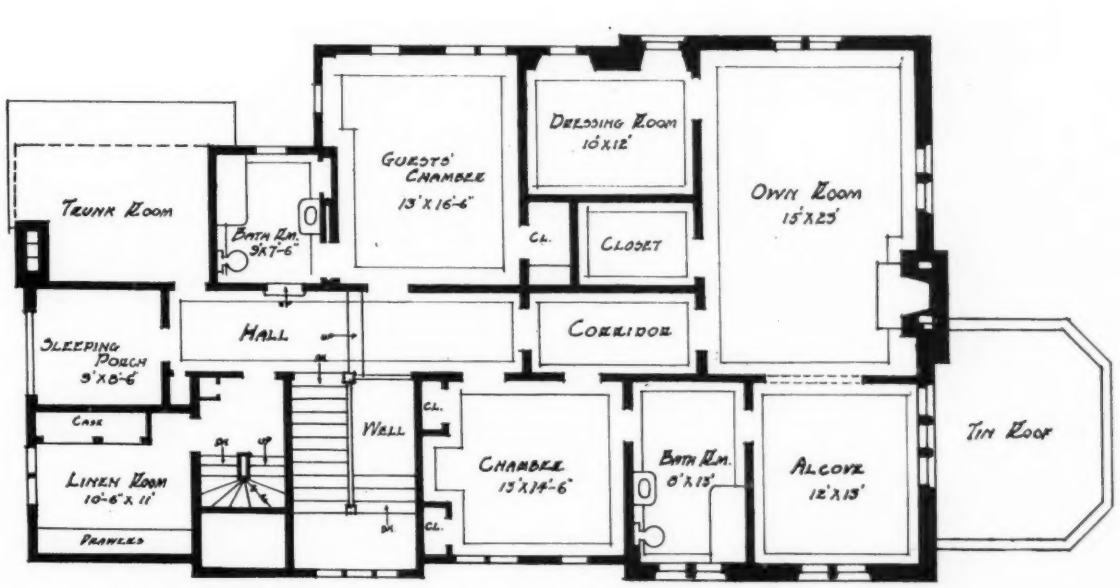
Dining Room, Residence for Mrs. Clare Farnsworth
Mr. W. Marbury Somervell, Architect, Seattle, Wash.

PACIFIC COAST ARCHITECT
JUNE, 1911

Stairway, Residence for Mrs. Clare Farnsworth
Mr. W. Marbury Somervell, Architect, Seattle, Wash.



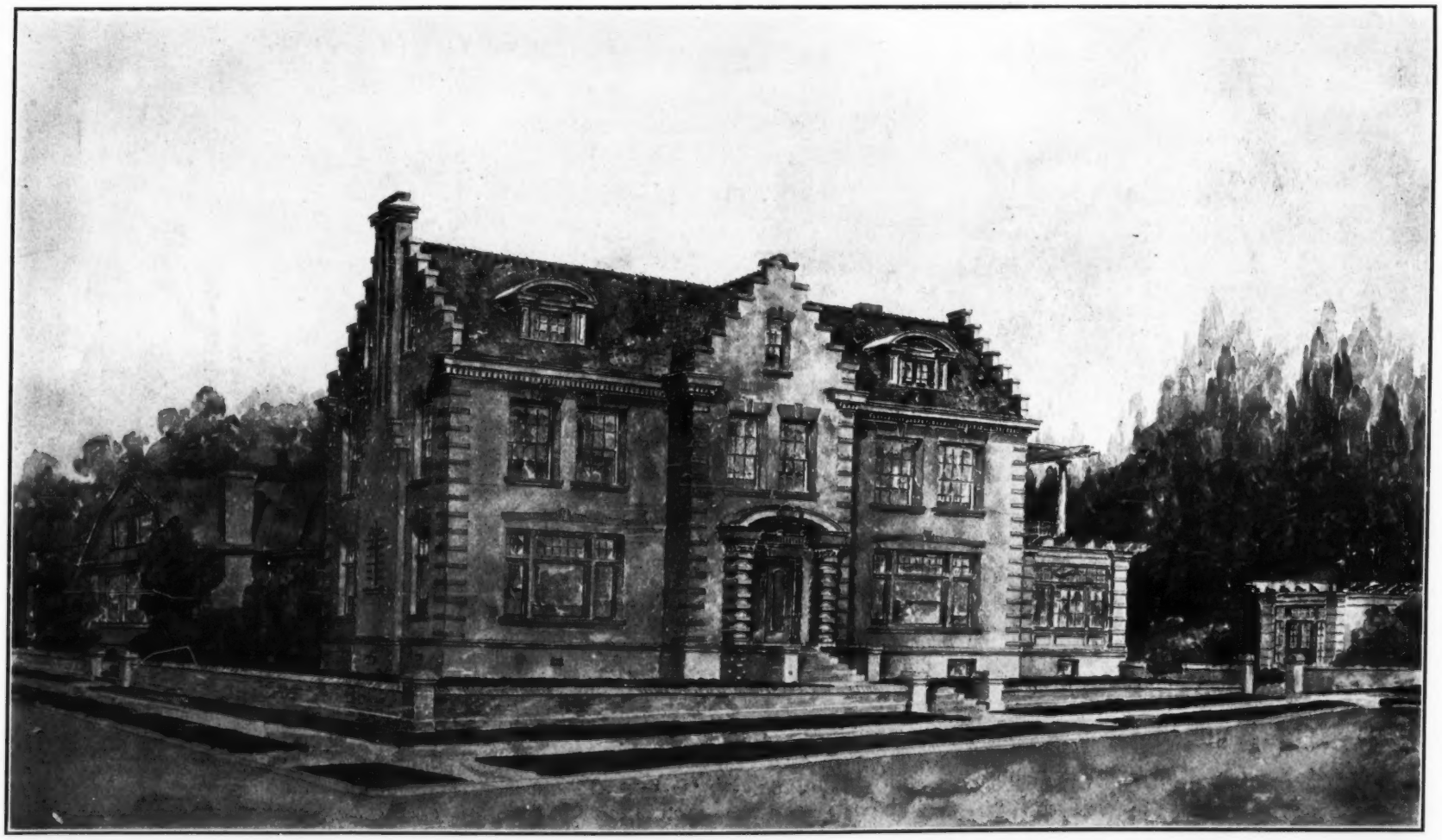
FIRST FLOOR PLAN



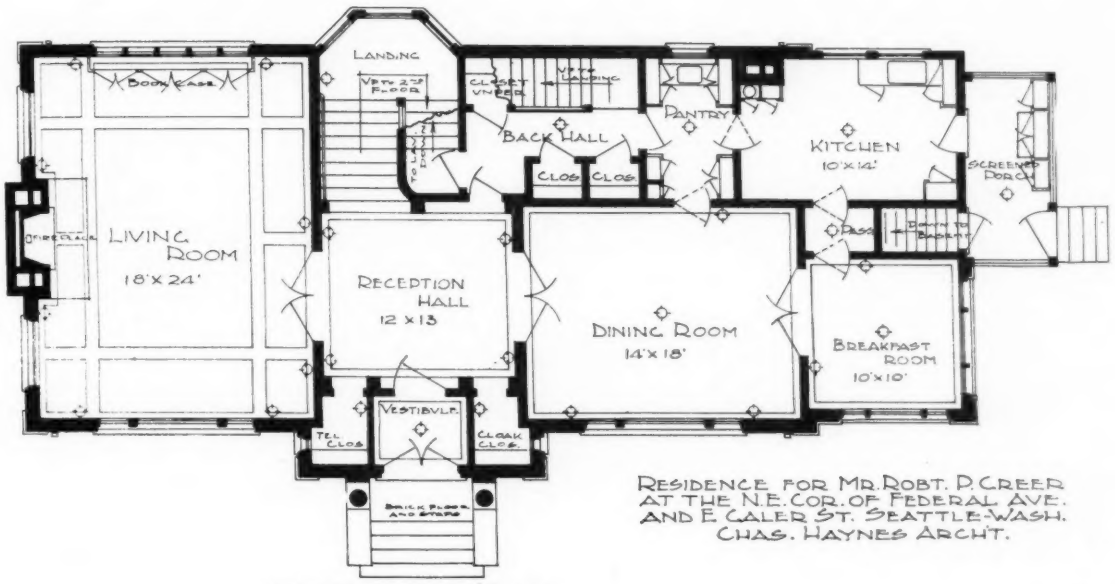
SECOND FLOOR PLAN

First and Second Floor Plans, Residence for Mrs. Clare Farnsworth
Mr. W. Marbury Somervell, Architect, Seattle, Wash.

PACIFIC COAST ARCHITECT
JUNE, 1911

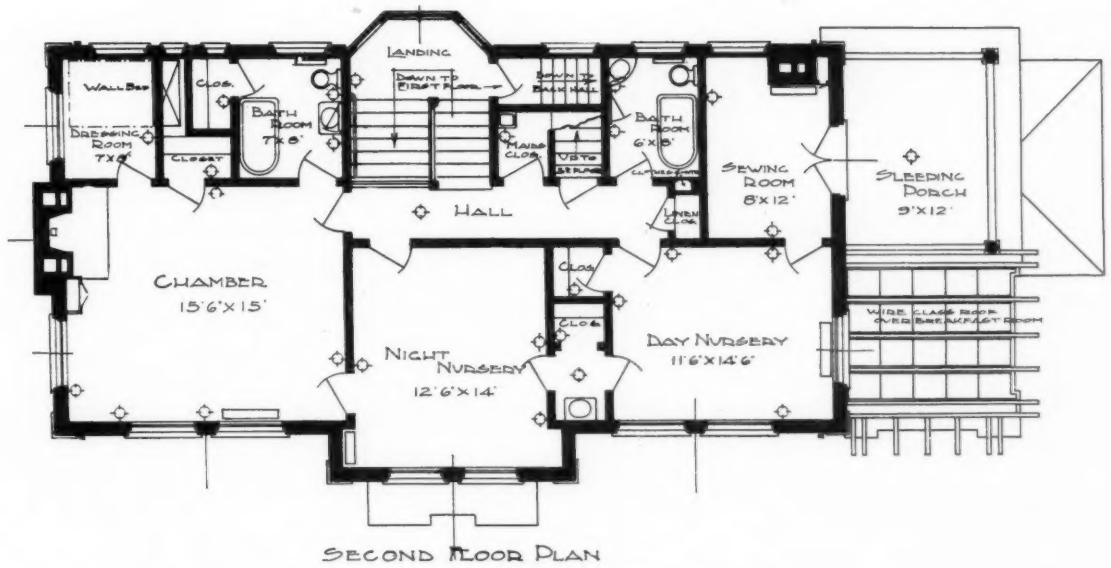


Residence for Mr. Robert P. Greer
Mr. Charles Haynes, Architect, Seattle, Wash.



FIRST FLOOR PLAN

RESIDENCE FOR MR. ROBT. P. CREER
AT THE N.E. COR. OF FEDERAL AVE.
AND E. CALER ST. SEATTLE-WASH.
CHAS. HAYNES ARCH'T.



SECOND FLOOR PLAN

First and Second Floor Plans, Residence for Mr. Robert P. Greer
Mr. Charles Haynes, Architect, Seattle, Wash.

PACIFIC COAST ARCHITECT
JUNE, 1911

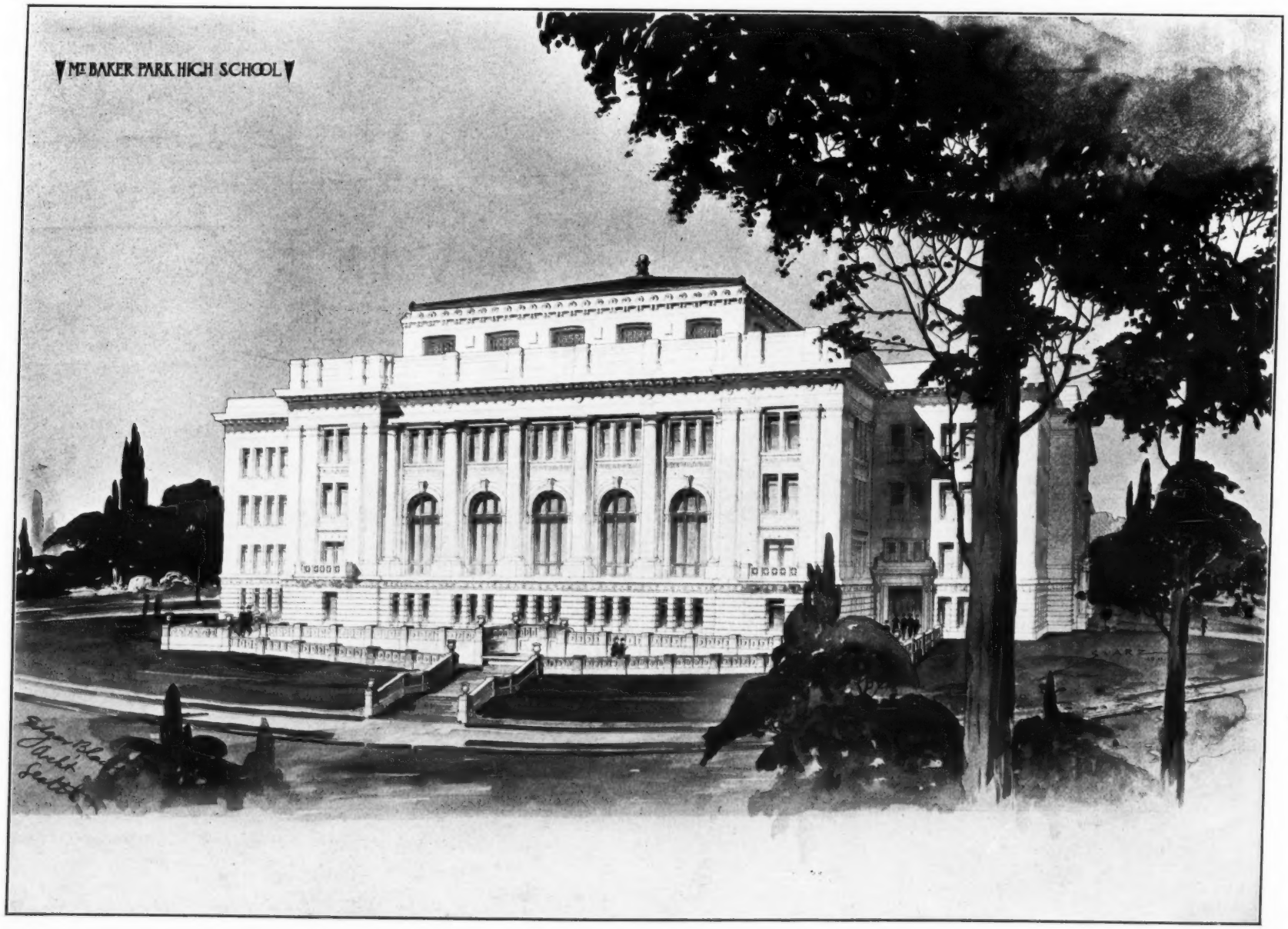
Front Elevation, Residence for Mr. E. W. Allen
Wilcox & Sayward, Architects, Seattle, Wash.

Living Room, Residence for Mr. E. W. Allen
Wilcox & Sayward, Architects, Seattle, Wash.

Rear Elevation, Residence for Mr. E. W. Allen
Wilcox & Sayward, Architects, Seattle, Wash.

Residence for Mr. John Campbell
Bebb & Mendell, Architects, Seattle, Wash.

Bon Marche
Mr. John Graham, Architect, Seattle, Wash.



Mt. Baker Park High School
Mr. Edgar Blair, Architect, Seattle, Wash.

The Licensing of Architects

There would seem to be no good reason—logical, practical or ethical—to require from any man the payment of a yearly license fee (not a tax in the ordinary sense of the word) for the permission to practice any profession, writes an Oregon architect. None is imposed upon the lawyer, the doctor, dentist, nor is any such fee required in any of the trades. A mercantile tax, it is true, is exacted for the privilege of carrying on certain businesses, but the reason for such tax is obvious. It is only hucksters and the itinerant peddlers who come within the category of the annually licensed. Why architects should seek to get into this class can only be explained on the hypothesis given later.

Architectural license, with a vigilant building inspection department, is a negligible quantity. The number of plans coming to the office of the inspector that do not comply with the code, and are blue penciled for amendment, is surprisingly large, but the corrections are rigidly insisted upon before the permit issues and the possibility of a blunder is reduced to a minimum. Strict inspection of the building operation is enforced during the progress of a building, and any laches or neglect or failure to comply with the law is speedily checked, and the building can only be proceeded with when full compliance is made with the requirements of the building laws.

The incompetent man, whether architect or builder, is speedily discovered and forced out of business under such a system. He cannot go wrong, for he is not permitted to. If he does not know how to go right he is forced to quit. No license is given him.

Is not this better than exacting a paltry five or ten dollars from him, and then giving him a piece of paper, and dubbing the veriest dub a "certified architect"? In the proposed law provision is made to include every one now in the state who has the effrontery to call himself an architect, as an acceptable object upon whom to bestow the title if he has five dollars to pay for it. It is only the newcomer who is to be submitted to an examination to prove his efficiency or proficiency.

What is the object of the proposed law? Does it not seem to savor of fear of the newcomer, a hostility, prejudice or jealousy of him, that seeks to keep him out? It would not elevate the "tone" of the profession one whit, or at the most not more than five dollars' worth per man.

The Illinois or California laws have not been productive of any marked improvements in the profession. Under the latter law the use of the word "architect" is prohibited to any man not duly certified and who has not a seal of his office denoting his high calling. Nevertheless, parties calling themselves "designers" actually do design and build more houses than the duly legalized and licensed architects. It has been of no benefit pecuniarily and of no advantage professionally to the practicing architect. It may have deterred some timorous individuals from submitting to an examination and setting up as architects, but in all probability they must become "designers."

Off hand, how many of our own men could with any certainty give the strength of any described girder, or a graphic demonstration of the fitness of any truss to support a specified weight? What do they know about wind-stresses, moments or gyration or factors of safety? Yet a man might know all about these things and much more, and still be a poor architect. He might be a graduate of L'Ecole des Beaux Arts, or of Massachusetts Tech. or hold a diploma of architecture from Yale, Pennsylvania or Harvard, and be incompetent as a designer. The public soon picks the able from the inefficient, and no certificate from the state can be more effectual than public opinion. By a man's work shall ye know him. That comes near being Biblical, even if it is not an exact quotation.

It is to be hoped that the profession of architects is not to be narrowed, nor yet stilted. It should be free from prejudice.

Increased Brick Output

The enormous fire tax on the people of the United States imposed by flimsy and inflammable buildings, says Jefferson Middleton of the United States Geological Survey, in *Clay-Working Industries,* an advance chapter of *Mineral Resources* for 1909, has aroused public sentiment on the subject of fireproof construction, and as a result the demand for fireproof structures is increasing, and the growing use of brick and other products of burned clay has been the natural consequence. The use of hollow building tile or block for outer walls seems to be on the increase. Some very attractive architectural effects have been produced with this tile in combination with brick and with stuccoed outer surfaces. Improvements in front brick, both in texture and in color, have been attained during the last few years and have enhanced the value of this product as a building material.

Not only was 1909 a year of prosperity in the clay-working industries, but it was notable for the introduction of some important improvements. The most prominent of them is the brick-setting machine introduced in the West. The idea of handling brick by machinery originated in New England and a plant equipped several years ago with an elaborate system was the first to use the "unit stack." By this system the unit for handling was 1500 brick. The plant was destroyed by fire and was never rebuilt. In 1909 a system of handling from 600 to 1000 bricks on a somewhat different plan was put into successful operation in the West and is now being used in Chicago. By this system it is possible for the brick to be carried from the molding machine to the drier, from the drier to the kiln, and from the kiln to the stock yard or the delivery car or cart without being touched by hand. Each of these machines is said to do the work of 40 men.

More and more attention is being given to the preparation of clay by weathering, mixing, grinding, screening and tempering before it is passed through the molding machine. It has been found that the quality of the product is much improved by better preparation of the clay. The number of operating firms continues to decline. A few years ago there were scattered throughout the country many small plants, but the present tendency is to concentrate the industry and to build plants with high-grade equipment and large capacity. The average value of the output per firm reporting in 1900 was $14,859; in 1909 it was $32,818. The capacity of brick machinery has been greatly increased in recent years. A few years ago a machine that would make 5000 or 6000 brick an hour was considered a wonder. Today machines are in operation that will turn out three times as many brick. The great tendency in the clay-working industries is to reduce the cost of production by the use of more efficient machinery and by the elimination, as far as possible, of hand labor.

Architects Will Meet

South Bend, Ind., will entertain the annual convention of the Indiana chapter of the American Institute of Architects. One of the principal features of the meeting will be an address by Irving K. Pond of Chicago, president of the American Institute of Architects.

Shells Used For Paving

Experiments Conducted in Texas Prove Successful. Vast Deposits of Material Found Along Shores of Gulf of Mexico. Pavement Is Cheap

Decomposed shells, of which vast deposits are found along the coast of the Gulf of Mexico, is being experimented with as a material for paving streets and roads. Experiments that have been conducted thus far indicate that the shell road is a success. Within 50 miles of Houston, Tex., according to the estimates of engineers, there is sufficient of this material to construct a pike 200,000 miles long, 35 feet wide and six inches thick after rolling. This is the deposit along the shores of Trinity and Galveston Bays. It is estimated that there is an area of 50 square miles of the material with an average depth of 15 feet.

When shell is placed eight inches thick on a street and rolled down to six inches, it is as compact almost as cement, and with the proper crown sheds water. The *Houston Post* says:

"There is no material, and this has been demonstrated, that is more desirable for residential streets where the traffic is light—buggies, delivery wagons and autos when not used in the nature of an auto course.

"The same can be said of neighborhood roads where the traffic is confined to farm wagons and the lighter vehicles of the farmers in the course of natural events.

"For a county's main thoroughfare leading into a city like Houston, where the traffic is about as heavy as could be imagined, with all character of vehicles heavily loaded, all character of tires, and most of the steel tires narrow, where the roadway is used as an auto race course in addition to all the other traffic, shell will not stand up year after year without maintenance. If there is any material that will stand up under such conditions road engineers would like to be made acquainted with it.

"Just as soon as a road is paved it draws all the traffic. Autoists will go long distances out of their way to get on it. Autoists just out for a spin will make a run over such a road before they end their trip. Wagons loaded with lumber will make a detour in order to get on such a road, for it is a matter of economy in that it is less costly to place a double load on a wagon and almost double the haul, on a good road, than to load two wagons light for a haul over a rough road.

"On such neighborhood or residential roads as described above, shell paving is pretty. It is clean and noiseless.

"It is proposed that in some places where the traffic is a little below the average, that shell and asphaltum be used. While it has been demonstrated that this character of paving will not stand the traffic of this particular thoroughfare, which, as stated above, is extraordinarily severe, the experiment has demonstrated that under ordinary conditions as to traffic and with care such a combination of road material will produce a noiseless, dustless, roadway with a surface as even as an asphalt street. The asphaltum, with proper drainage, makes the roadway waterproof and holds the surface smooth and tough. And it is an economical paving."

San Francisco Grows Ornate

Lamp Posts on Kearney Street to Be Decorated with Flower Boxes

A street decoration scheme that offers a suggestion for Portland is about to be tried on Kearney street, San Francisco. It is proposed to have boxes suspended from the lampposts, the boxes to be filled with flowering and ornamental plants that are to be kept growing and carefully tended. The plan has been adopted by the Downtown Association, and is calculated to give that portion of the city a distinctive appearance and lend a charm to the old thoroughfare that will be truly Californian.

It was on Kearney street that the center of gaiety existed in the old days, and there much of the oriental and cosmopolitan life still exists.

In old Portsmouth Square is the monument to Stevenson with its reminder of his land of Bohemia. At the northern end is the Latin Quarter, the North Beach, Fisherman's wharf, and the cosmopolitan life of all nations. At the junction with Market street are the flower venders, with their baskets of colored flowers upon the sidewalks. And this addition to the ornamentation of the street will add to its individuality and charm.

This mode of ornamentation is said to exist in the European cities, particularly in Vienna. There the streets are said to have a particularly pleasing and gay appearance because of these hanging flower boxes.

Notable Brick Fence

That concrete has not yet succeeded in robbing brick of its birthright, preserved in all ages and most of the world's countries, is constantly being demonstrated. One of the latest and most marked instances of the employment of brick for combined utilitarian and ornamental purposes, is seen in a handsome fence, perhaps wall is the most correct word, that surrounds the great subsurface area to the west of the Pennsylvania Railroad's great granite passenger station in New York City.

The curbing of the broad sidewalk that surrounds this immense structure has excited the admiration of all beholders. It is composed of deep blocks of granite about ten feet long and eighteen inches wide. These curbstones are so cut as to interlock in a solid and most pleasing manner. One seldom sees a more solid piece of construction work.

The brick fence referred to is equally interesting and attractive. This fence, or wall, which is six and a half feet high, is built of light gray mottled brick set on a foot-high granite base and having a solid heavy granite coping. To break what would otherwise have been the monotony of such a fence extending continuously for hundreds of feet there are built in it at regular intervals of about thirty feet square posts of about a two-foot face projecting slightly beyond the face of the wall and carried up above the coping and crowned each with a granite cap; and further to relieve the wall's monotony certain courses in it have been laid with alternate bricks slightly projecting, to give in the face of the wall between the posts the effect of panelling.

Praise For Portland

"Architecturally, Portland is considered the most promising as well as most prosperous city on the Pacific Coast," said Edward T. Foulkes, a prominent San Francisco architect, who is visiting his parents. "Portland's growth in the four years since my last visit here has been astounding. Her buildings now being built would be a credit to any city.

"In Coast business realms Portland is most favorably spoken of; in fact, it is regarded as the busiest city on the Pacific Coast. Los Angeles and San Francisco are busy, but Portland's building and air of business is better."

Mr. Foulkes is a Portland boy, having been graduated from the Portland High School, completing his technical education at the Boston Technical School, where he won distinction by winning a two year's traveling scholarship, seeing Europe.

Among the Architects

Architect H. G. Ellis, of Spokane, was a visitor in Portland during the Rose Carnival.

Architect A. H. Faber has moved from 212 Commercial Block to 322 Mohawk Building.

George Mackie has been appointed Building Inspector of Spokane to succeed J. N. Goodwin.

J. W. Swope has retired from Whidden & Lewis, and is reported practicing at Vancouver, Wash.

Architect Lionel Deane, formerly practicing at San Francisco, has opened offices in the Fechheimer Building, Seventh and Washington streets.

Roland E. Borhek has opened offices for the practice of architecture in the Savage-Schofield Building, Tacoma.

Architect P. A. Fee, of the firm of Parr & Fee, Vancouver, B. C., has returned from an extended trip to San Francisco.

Architect A. H. Albertson, Seattle representative of Howells & Stokes, has returned from a short trip to San Francisco.

Architects Spalding & Umbrecht, located at 405 Globe Building, Seattle, have dissolved partnership. Mr. Spalding has opened a contracting office in the Globe Building.

City Engineer L. T. Doyle, of The Dalles, who was accused of working for private individuals at times when the city was paying for his services, was exonerated at a recent meeting of the council.

The bungalow shown on the front cover of this issue is that of Mr. C. E. Groesbeck, Twenty-third and Everett.

The Bell Decorating Company, 832 Central Building, Seeattle, are being highly complimented on the decorative work of the Orpheum Theatre, of Seattle, of which they were the contractors.

R. N. Hockenberry & Co., are the architects of the bungalow shown on the front cover of this issue.

Wood for Reinforcing Concrete

Engineering has an article describing a method by which concrete can be efficiently and economically reinforced simply by means of wood. As is well known, the principle of reinforced concrete rests on the fact that cement is strong in compression and weak in tension; consequently, if some material can be placed in a concrete beam, so arranged as to take the tensile forces, while the concrete takes the compressive forces, an extremely economical building material is obtained. At first sight, continues *Engineering*, it would appear that wood could not efficiently replace a metal like iron. It is true that, for many purposes, wood may be considered as extremely weak when compared with iron. Under certain conditions, however, wood has a very high tensile strength, so much so that, in ordinary circumstances, wood does not fail in tension, but generally by shear. Fortunately, the conditions for ensuring that the full tensile strength of wood shall be obtained are met with in reinforced concrete work. Providing proper adhesion takes place between the wood and the cement (and tests have shown this to be the case), the timber cannot fail by longitudinal shear, but can only break in pure tension. It is not suggested, however, that wood reinforcement should be compared with steel reinforcement for all purposes, but rather that it has a special sphere of its own, without entering into competition with ordinary ferro-concrete. Just as ferro-concrete is tending to replace steel construction for buildings, bridge construction, etc., so may we expect to see this ligno-concrete competing advantageously with ordinary bulk-wood construction, as used in piles, posts, beams, footbridges, fencing, etc.

Exhibition of Circle A Club

The Festival week at Circle A Club has been rather quiet, following as it did two weeks of extreme activity in an exhibition of commercial art. The exhibition was a departure from the regular line of exhibitions, giving to the patrons of "the beautiful" in Portland an insight into the newspaper and illustration field. It gave to the layman an idea of the manifold processes through which an illustration must go before it appears to the public in our books and magazines.

The engravers and illustrating bureaus of the West put forth their best efforts to supply the club with their better class of work. Several posters in the German impressionistic style by Mr. Travezio, of New York, and a score of cartoons from the *Denver Post* attracted wide attention.

Sketch, life and design classes will continue throughout the summer, as the influx of artists and designers from the East has greatly increased the active membership and gives the younger men of the club an excellent opportunity to become familiar with the popular styles and methods.

Circle A Club wishes to extend their thanks to the public who saw fit to attend this exhibition and to the men throughout the country who, through their co-operation and loans, helped to make it a success.

Cement Company Buys Land

Portland Concern Will Establish Plant in Jackson County

The Portland Cement Company of this city, of which Amon Moore is president, has bought a large tract of land in the Kane's Creek district, west of Gold Hill, in Jackson County. The consideration was not announced. The land contains valuable deposits of lime and cement rock, and the company has had experts at work testing the deposits during the last two months. An option on the property was obtained several months ago.

The tract embraces about 2500 acres, and includes a large amount of timber. There are also four miles of roadbed, one-third of which has been laid with ties and steel rails.

The cement company will proceed at once to develop the property, completing the railroad, building a factory with 400 barrels daily capacity, and establishing a group of eight lime kilns.

Prison Brick Will Save

State to Use Product at Different Institutions

Prison-made brick will be used in the construction of new buildings for the state institutions, announces Governor West. There will be approximately 3,000,000 brick made at the Penitentiary yard this year. Of these 1,000,000 will be used on buildings at the Oregon Agricultural College, 500,000 will be used on the new ward at the Asylum, 500,000 will be used by the National Guard for armory purposes, and 1,000,000 will be used on the additional Capitol building.

The brick will be paid for at the rate of $5 a thousand from the various appropriations for the institutions. As the market cost of brick is $9 a thousand, the Governor estimates a considerable saving will be made, to apply on the maintenance cost at the institutions.

Sublimated Thatched Cottage

While a vast deal of money is being expended on country houses, a marked tendency towards simplicity in appearance has developed within recent years. This is particularly true of the fine country homes of New Yorkers that practically cover the hilltops of Westchester County. Many of these are decidedly pretentious in appearance, but their owners no longer take pleasure in speaking of them as great estates, as many of them really are, but prefer to designate them as modest homes. This idea is being carried into practical effect in the construction of new and costly homes in that inviting section. This tendency towards simplicity is fast impressing itself upon the architecture of the entire section and sublimated, or refined, structures are fast being constructed.

The style that has been introduced and is fast becoming popular is that presented by a firm of New York architects, Albro & Lindeberg, which produces a thatched roof effect, thus returning to the English modes in vogue centuries ago. Of course no architect in these practical times would deliberately design a house, or rather, building with a roof of actual thatch, but these architects succeeded in designing a shingle roof that, to all practical appearances, was one of thatch.

This idea has, to an extent, been adopted in the rural palace of James Stillman, Jr., of New York, on top of one of the Pocono hills in Westchester. The immense thatched house at Pocantico, with its half timbered walls, its sloping roofs and other peculiarities, presents the "feeling" of an English cottage of the better class. The roof is composed of shingles, soaked until they can be made to assume any desired outline of graceful curve and develop the sense of depth, the lines and ridges that lend such a charm to wayside English cottages, rendering them a practical and pleasing part of the attractive landscape.

As designed by the architects this roof was made the striking feature of this country house. Following not only traditions but good taste, such a roof could not crown a building of pretentious height, hence this one was made low, seemingly hugging the ground which supports it as gracefully as any English home of lowly estate.

Low as the great house is, it is still further dwarfed in appearance by broad, low windows and other architectural devices which fearlessly violate the well established rules of the builder's art. As a matter of course such a subdued, sublimated cottage could not have a piazza attachment: this would violate all the consistencies, besides being too strongly suggestive of the fine country estate, to avoid which was one of the chief anxieties of the designers. On the garden side of the house one wing has a masked porch and a pergola so subdued as to be scarcely recognizable as such. These are the only outwardly visible deference to the uses of the house.

The garden entrance, in reality the chief approach to the house, which sits on the brow of the hill, leads along a brick wall through beds of flowers, thus adding to the rustic effect. The door is without the slightest ornamentation, a veritable hole in the wall. The building material employed is in keeping with the entire architectural scheme, the stone having been received from the neighboring fields. The other side of the house is supplied with a small and unpretentious porch, from which a splendid view of the fine scenery to the north can be secured. This facade conforms, as completely as the other, with the plan of the cottage.

The other houses on the extensive grounds conform in style with the cottage. There is the superintendent's house, with its thatched roof, showing the prettiness of this new device to probably greater advantage than even the principal building of Mondanne, as the house is called. Then there is the gardener's house, with the picturesque detail of the branches bursting through the so-called thatched roof, just as they might have done through the real roof after which this one is modeled.

These two smaller buildings cost vastly more than the cottages after which they are supposed to have been modeled. Simple as is the style of these structures and other attendant improvements, this country place is one of the most costly in Westchester. The estate is supplied with every modern improvement conducive to comfort, including a large power house to supply electricity. This dropping of ostentation, not to say vulgar, display of wealth in country residences is to be highly commended and ought to become the rule, since what is called fine and bold architecture does not harmonize well with rustic surroundings.

Preparations For Australian Federal Capital

The Minister for Home Affairs in the Federal Cabinet, writes Consul Bray from Sydney, announces the intention to establish a government brick-making works within the federal territory at Canberra to make bricks for the capital building operations. The discovery within the new capital area of promising deposits of raw material for this industry has led to experiments by the Home Affairs Department to test its suitability. Sample lots have been sent to both Melbourne and Sydney, and it is expected that results will be satisfactory. The supply of the clay is said to be practically unlimited.

The Home Affairs Department is, furthermore, making active preparations for road construction. Six heavy "trailer" wagons, each of six-ton capacity, are under construction locally. An order has been placed with a local firm for a stone crusher and elevator. A hauling engine will soon be required. American manufacturers who want to compete for business in this quarter should address the Department of Home Affairs, Melbourne, Victoria, Australia, marking their communications "Federal Capital Engineer."

Substantial Performance of Contract

Where defendant contracted to build a house for plaintiff according to a sample, plaintiff was not required to accept a house which was not like the sample, though equivalent in value or utility, but was entitled to refuse performance if the structure tendered was different from that required, allowing only for immaterial deviations involving neither change of plan, material, or general character of workmanship. Nance vs. Patterson Building Co. Court of Appeals of Kentucky. 131 Southwestern 484.

Clay Products

(Continued from Page 88)

and clay products used in buildings will give the highest return on the invested capital.

That clay products are not used is due to the fact that the clayworker has not been alive to the modern ways of advertising his goods. The clay journals, such as the *Clayworker, Brick Builder, Brick and Clay Record* and others, have done a great deal of this promotion work, but as their circulation is only limited, it has not reached the parties most vitally interested in the use of clay products. The Building Brick Association of America is now pursuing a course of education of the general public to the advantages of the use of clay products as a building material, and we sincerely hope that their efforts will be successful.

Trade Notes

The Portland Architectural Decorating Company has moved from 23 Grand avenue to 388 and 390 East Ash street, corner Grand avenue.

The F. T. Crowe Co. has sent out cards announcing the election of F. W. Farrington as vice-president and his appointment as manager of the local office. Mr. Farrington was formerly sales manager for the United States Gypsum Co. and succeeds J. H. Wood.

Rodgers & Kohler, Seattle, jobbers in tile, brick and fireplaces, have removed from the Globe building to 1101 Post street.

H. J. Cress, of Timms, Cress & Co., is absent on an eastern trip which will include New York City.

R. A. Eldridge, manager of the Western Refining Co., has returned from a trip to Seattle, where he has arranged with A. R. Gardner & Co., 103 Yesler Way, Seattle, to handle their Wear-Best Creosote Shingle Stain.

Oregon Brass Works, 73 Second street, report having installed the Hester system store fronts in the Ben Selling, Railway Exchange and new addition to Portland Hotel, and many of the most attractive fronts in Seattle and Vancouver, B. C.

The Lithic Manufacturing Co. has recently installed the Racolith floors in the new stores in the Portland Hotel.

S. B. Cooke, local manager of the Holmes Disappearing Bed Co., reports that he has sold over 400 beds during the past two months. Lawrence Holmes, president of the company, has been in the city helping Mr. Cooke during his rush.

The Lithic Manufacturing Co. has installed the "Higgins" all-metal screens in the Curt Dittmar residence and the "Higgins" metal screens and doors in the Peter Marsden residence.

The handsome appearance of the Cream Plastic face brick of the Washington Brick, Lime & Sewer Pipe Co., which is being laid on the new Multnomah Hotel, is causing considerable comment.

E. D. Timms, of Timms, Cress & Co., has returned from Collins Hot Springs, much improved in health.

Portland Sheet Metal Works has installed the labeled fireproof windows and doors in the Selling building; labeled windows in the Union Meat Co.'s plant at Kenton, and the roofing, skylights and fireproof doors in the Oregon-Washington Railroad & Navigation Co.'s freight sheds.

L. A. Spears, president of the Washington Brick, Lime & Sewer Pipe Co., of Spokane, was one of the visitors to the Rose Carnival.

The Lithic Manufacturing Co. received the contract to install the scagliola work in the Catholic Church at Coeur d'Alene, Idaho, the lobby and vestibule of the Fritz Apartments, Twelfth and Taylor streets, and the Racolith flooring in all bath and toilets.

The Washington Brick, Lime & Sewer Pipe Co. is furnishing 200 tons of light cream full glazed terra cotta for the Wilcox building, also 700 tons imitation light sandstone terra cotta for the Lincoln High School, shipments of which will begin July 1.

It is reported that the Acme Cement Co. of St. Louis is negotiating for the purchase of the Western Lime & Plaster Co. of Portland.

The Sullivan Tile Co. of Washington has closed its Seattle office.

C. T. W. Hollister, Pacific sales manager of the Washington Brick, Lime & Sewer Pipe Co., left recently for a short trip to Seattle, Tacoma and Vancouver, B. C.

W. M. Jacobs of Vale has been given a patent on a grade finder invented by him. The invention does away with the old-time spirit method and by the use of a scale and needle there can be no going astray from proper grades wanted. It is claimed that any person can, by the use of this grade finder, run perfect ditch grades, curves, roadbeds, etc.

The Columbia Elevator Co. has improved upon their individual electric elevator to such an extent that it has become universally adopted for use in the best hotels, department stores and apartment houses. It is mechanically operated and will stop at any floor to which it is sent. Among the new buildings in which it has been installed are the Warren Apartments, Wheeldon Annex, Cumberland Apartments and Lowengart Hotel on Washington street.

The Medford Brick Company will furnish approximately 1,000,000 of their sand mold brick for the new five-story hospital to be erected there.

Ralph R. Wheaton, a contractor at Prineville, Ore., has started a brickyard at that place.

Eugene, Ore., building permits amounting to $27,750 were issued during the month of May just passed, compared with $40,891 in May, 1910, but the first five months of this year show a greater total than the first five months of 1910. The total for January, February, March, April and May, 1911, is $156,425, compared with $154,016 for the corresponding period last year.

The Spokane building permits for May, 1911, were 182, permits with a value of $323,235 as against 235 permits for May, 1910, with a value of $824,425, showing a loss over last year of over half a million dollars.

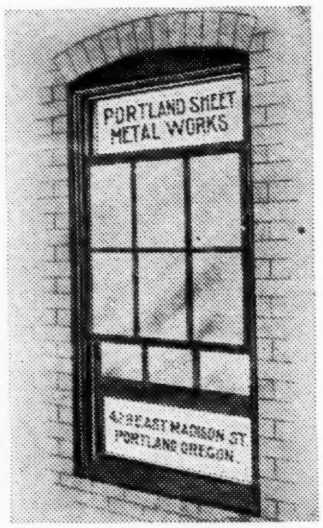
Among the recent buildings being constructed of Newberg Red Face Brick are 5-story apartments Eleventh and Clay streets, 4-story apartments Twelfth and Harrison streets, 3-story apartments East Thirteenth and Ankeny streets, residence Twenty-sixth and Marshall streets, Elks' Temple at Eugene, Oregon, and a store building at Lafayette, Oregon.

Reinforced Concrete Poles

An immense amount of pine lumber is being used in this country in the form of poles for electrical current, and this is constantly and rapidly increasing. Iron poles are employed, but their high cost restricts their use to very narrow limits. To some extent reinforced concrete poles are used, but thus far they have made but a small showing. In Germany, however, they are finding increasing favor and are coming to be quite generally employed.

Concrete poles, of great strength and long life, are being made in Germany in a very simple way and at a small cost. Large numbers of electric light posts are used in connection with the "Hohenzollern Sportpalast," the great skating rink of Berlin. As wooden poles are possessed of short life and those of iron are very expensive, those made of reinforced concrete were recently installed. These poles were all cast in wooden forms at the site of the work. They were fabricated and erected without the use of machinery and at a cost of not more than one-half that of iron poles. They were lightened by employing a tapering section. At regular distances holes were left in the poles, which not only reduced their weight and cost, but reduced the surface subject to wind pressure. The poles, curved over at the top, are 44.3 feet in height, of which 8.2 feet is in the ground. The poles, weighing more than nine thousand pounds each, were raised by wooden shear-legs without injury when only fourteen days old.

How is your Insurance Rate?



Why pay higher insurance than is necessary?

Do you know that

The Portland Sheet Metal Works, Labeled Fire-proof Windows and Doors

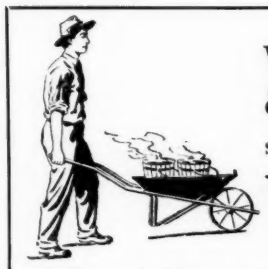
are made under the supervision of the National Board of FIRE UNDERWRITERS?

PORTLAND SHEET METAL WORKS

Manufacturers of

Cornices, Skylights, Ornamental Sheet Metal Work, Marquises, Spanish Tile, Composition, Copper, Tin, Tile Roofing and Heavy Sheet Metal Work and Brick Tile at 4c per pound, at their factory

429 E. Madison Street East 1666 **Portland, Oregon**



WATSONITE FLOOR & ROOF COMPANY

Sole Contractors For Mixing and Applying

Watsonite

A Remarkable new Flooring Surface for industrial building such as Basements, Stables, Warehouses, Breweries, Slaughter Houses, Dairies, Etc., Etc.

Watsonite Flooring

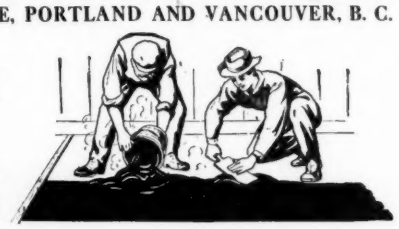
is Wear-proof, Water-proof, Chemical-proof, cannot crack or chip. Is firm, tough and has a live steel spring elasticity that takes up bumps and hard knocks. Is not slippery, cleans easily, cannot absorb and is warm and comfortable under foot

Watsonite Floor & Roof Company

SEATTLE, SPOKANE, PORTLAND AND VANCOUVER, B. C.

SEATTLE OFFICE:
232 GLOBE BLDG.

SEATTLE TELEPHONE
MAIN 7871



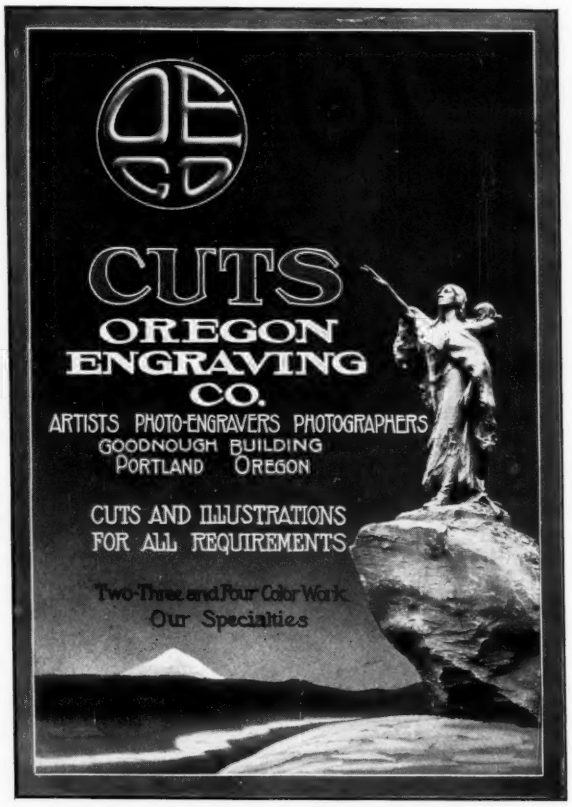
Tile

Fred W. Wagner

Agent For Moravian Tile

363 STARK ST., PORTLAND, OREGON

TELEPHONE MAIN 8339



G. P. EISMAN
LUMBER COMPANY

Look over our stock—
WAREHOUSE 314 E.
WASHINGTON ST.
PHONE EAST 5716

EXCLUSIVE Agent for T. Wilce Co.'s Chicago Eastern High-grade Hardwood Flooring—*The House of Quality*—Why buy cheap substitutes when you can get the high grade and superior quality American product for a few paltry dollars more? Why buy expensive furniture to install on inferior floors? Houses with the Wilce floors will sell for more money.

See that your specifications call for the T. Wilce Co.'s Flooring—name stamped on every piece; accept no others. There's class to our floors. They are laid with artistic skill

WE CAN HANDLE ANY CONTRACT FROM A FOUR ROOM HOUSE TO A SIXTEEN-STORY SKY-SCRAPER AND GUARANTEE SATISFACTORY RESULTS.

WE ALSO CARRY ROUGH OAK LUMBER

Office 519-20-21 Railway Exchange Phones: Marshall 2248, A1274

"Elbram" Fancy Brick

Is an Oregon Product
Made at St. Johns

We furnish it in any shade and in any color

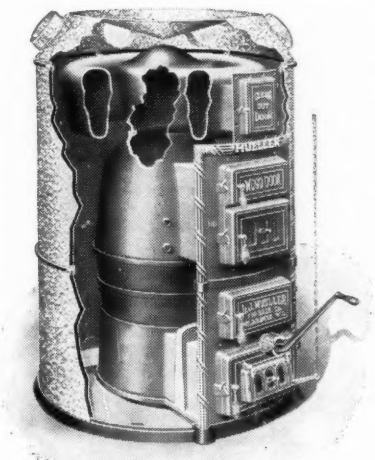
"Elbram" Face Brick

Has the same distinctiveness as our brick and can be made to order in any shape, size, color or design

Pacific Brick & Marble Co.

HEILIG THEATRE BUILDING

C. L. Burton, President and Manager Phone Main 5299



Buy a Mueller and you are sure of the best. Our Seattle branch carries everything in the heating line

21 STYLES
155 SIZES

A MUELLER FURNACE
or A MUELLER BOILER

Will give you better service
Made of the choicest material

L. J. Mueller Furnace Co. of Milwaukee
Main 3073 and A 219
Branch Office
403 Occidental Ave.

TRANSITS, LEVELS

AND EVERY INSTRUMENT AN ARCHITECT OR ENGINEER NEEDS

Aneroids
Compasses

Plumb Bobs
Rods
Range Poles
Tapes
Chains
Field Books
Cross Section
Profile and
Drawing Paper
Drawing Boards
Thumb Tacks
Blueprint Paper
Drawing Inks
Water Colors
Devoe Artists' Materials

Scientific Books

Have you seen—that means bought—a "Beck" Vertical Filing Case yet?

KILHAM STATIONERY & PRINTING CO.

CORNER FIFTH AND OAK STREETS, PORTLAND, OREGON

A. G. WHITEMAN H. B. SHOFNER

Oregon Art Tile Company

We make a specialty of Artistic Fire Places and Mantels. Estimates furnished for Tile Floors, Bath Rooms, etc.

PHONES: MAIN 3889, A 7323

Office and Show Room

413 ALDER STREET, PORTLAND, ORE.
KNIGHTS OF PYTHIAS BUILDING

CONTRACTOR'S OFFICE

Galvanized Steel Sectional Fireproof Buildings

We make a specialty of Garages and Seaside Cottages, made of Japanned Steel Frame, covered with heavy Galvanized Steel sections locked and bolted together. Quickly erected or taken apart. Approved by the Building Department and Board of Fire Underwriters. Phone East 805

The Gunther-King Co., 144-146 Page St., Portland, Ore.

Northwestern Tile & Mantel Co.

JOHN EADIE, Manager

Floor, Wall and Fireplace Tilework of Every Description

TILE MANTELS A SPECIALTY

Phone Marshall 1015

227 Lumber Exchange Bldg., Portland, Oregon

COLUMBIA ELEVATOR CO.

DESIGNERS AND BUILDERS OF
Hydraulic and Electric Dumb Waiters and Freight Elevators

Also Hand Wood and Trunk Lifts

Estimates Furnished *Telephones:* East 3857, B 2444

254 EAST SIXTH STREET, PORTLAND, OREGON

Specialists! That's Us!!

We Handle Exclusively

Janitors' Supplies for Apartment Houses, Office Buildings, Hotels, Hospitals and Institutions

Let Us Figure With You

MAIN 6753

WESTERN SALES CO., Inc.
44 SECOND STREET, PORTLAND, ORE.

Reynolds' Commercial Studio

Successors to
Geo. M. Strong

Printing, Kodak Developing, Bromide Enlarging, Copying. Cuts for Catalogs—High-Grade Work Only. Special Attention Given to View Work

Phone Main 8065

163 West Park : : : Portland, Oregon

Reinforced Concrete

a Specialty

EXPERTS IN STONE, CONCRETE AND CEMENT FINISHING

A. E. ARQUETT
BUILDING CONSTRUCTOR

421½ E. Morrison Street, Portland

Phones: B-3093 *and* East 5176

SEE me before letting your contracts for wrecking buildings—first and foremost in all our undertakings. We also build all kinds of structures using our second hand material, in appearance as good as new. *Get our prices.*

FOR SALE—We have on hand at times, second hand joists, rough lumber of all kinds, brick, lumber, plumbing supplies, and all kinds of iron pipe, steel and cast iron. Dry wood out of wrecked buildings cut to stove lengths also doors, windows and plate glass.

International Building & Wrecking Company

A. F. Elerath, Manager

General Contracting, Building, Brick and Concrete Work and Wrecking a Specialty

We have ten years experience in the building and wrecking business

307 FOURTH STREET PORTLAND, OREGON

TELEPHONE MARSHALL 1834

Largest Stock of Oak, Maple, Beech Birch, Mahogany and Walnut

Flooring

In the Pacific Northwest

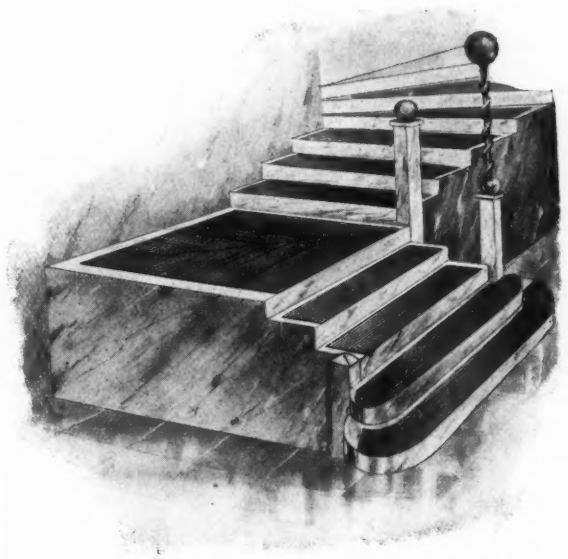
Manufacturers of Parquetry Flooring. Have a large force of expert mechanics and are in a position to give estimates of finished floor work. We use sanding and scraping machines for surfacing dance halls and skating rink floors. Sell wax, wax brushes, furniture rests and glass sliding shoes.

WRITE OR CALL AT

Portland Hardwood Floor Co.

286 Yamhill Street, Portland, Oregon

Safety Steel Stair Tread



Showing Safety Steel Stair Tread in application
Can be made to fit any form of nosing

P. L. CHERRY CO., Inc.

306-307-308 Lumber Exchange Bldg., Portland, Ore.

Western Refining Company

WESTERN REFINING COMPANY · BEAVER BRAND · PORTLAND OREGON

MANUFACTURERS OF

Beaver Damp-Proof Paint
Beaver Water-Proof Pitch

"Wear-Best" Creosote Shingle Stain
Black Paints Oils and Varnishes

Get Our Prices—We can save you Money on Our Material

ALL GOODS SOLD UNDER A GUARANTEE

Office and Plant, 351 East Oak Street, Portland, Oregon

Timms, Cress & Co.

INCORPORATED

Manufacturers Agents and Jobbers

184-186 Second Street, Between Yamhill and Taylor

Portland, Oregon

Building Materials

Duplex Joist Hangers
Duplex Steel Post Caps
Bar-Lock Sidewalk Lights
Bar-Lock Sky Lights
Bar-Lock Sidewalk Doors
Cleveland Metal Lath
Kinnear Steel Rolling Doors
Mason Safety Treads
Oak and Maple Flooring
Korelock Hardwood Doors
Pecora Mortar Stain
Cabot's Creosote Shingle Stain
Cabot's Cement Stains
Cabot's Deafening Quilt
Cabot's Conservo (Wood Preservative)
Bay State Brick and Cement Coating
McRae Damp-Proofing
Vulcanite Roofing
Banzai Enamel
Magnolith Sanitary Flooring
Far West Clay Co.'s Partition Tile
Hebron Pressed Brick
Protection Metal Carner Bead
Sterling Stone

And then some

Portland Cement
Hardwall and Land Plaster
Hydrated Lime
White Sand Fire Brick

Factory Distributors of

Roofing and Building Papers

Western Building Material Company

816-817 Lewis Building, Portland, Oregon

TELEPHONES MAIN 6211—HOME A1107

San Francisco, California Seattle, Washington

Washington Brick, Lime & Sewer Pipe Company

ESTABLISHED 1888

Manufacturers of

Architectural Terra Cotta

Glazed matt and standard, all colors, Face brick, plastic and dry press, all colors; Common brick, Fire brick, Fire clay, Sewer pipe, Partition tile, Tile coping, Mantel tile, Hollow Building blocks, Flue lining, Electric conduit tile, Chimney pipe, Chimney tops and White lime

General Office
Spokane, Washington

Portland
512 Lewis Building

ARCHITECTS:

¶Save trouble and worry by specifying the ***Faultless Closet Combination,*** and insist on its being installed. ¶Guaranteed by the manufacturer to give perfect satisfaction. ¶Tank with glass ball and float. ¶Bull dog seat. ¶Faultless bowl.

M. L. KLINE, WHOLESALE PLUMBING and STEAM SUPPLIES

Sample room of modern plumbing fixtures maintained for use of Architects and the Trade

84-86 FRONT STREET, - - PORTLAND, OREGON